

Clinical Oncology Ngs Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The Clinical Oncology NGS Market is expected to grow at the registered CAGR of 16.9% during the forecast period, 2022-2027.

COVID-19 significantly impacts the clinical oncology NGS market. The guidelines issued by the government of different countries for availing the treatment of cancer during the pandemic are also driving the market's growth. For instance, the Ministry of Health and Family Welfare (MOHFW), the Government of India, released guidelines in March 2020, reporting that Cancer treatment is considered a high priority essential non-COVID-19 healthcare facility. However, a National Cancer Institute article in March 2021 reported that cancer screening decreased during COVID-19. Additionally, The NGS diagnostic technology has the potential advantage of determining the genetic sequence of a virus and helping scientists understand the mutations. Throughout the COVID-19 pandemic, government authorities worldwide constantly work with the private sector to bring NGS technology as a potential diagnostic tool into the market. For instance, in June 2020, the United States Food and Drug Administration (USFDA) issued an emergency use authorization (EUA) to Illumina Inc. for the first COVID-19 diagnostic test utilizing next-generation sequence technology.

The global clinical oncology next-generation sequencing market is driven by factors such as the growing popularity of personalized medicine in clinical oncology, decreasing in cost of genetic medicine, the rising prevalence of cancer, the growing need for early cancer diagnosis and treatment, and the continued advancements in cancer research.

Personalized medicine involves the use of an individual's genetic profile (genome) in the prevention, diagnosis, and treatment of diseases and has the potential to offer the best response and highest safety to ensure better result outcomes. The market is expected to grow with advancements in precision therapies and diagnostics, coupled with breakthrough innovations, such as Next Generation Sequencing (NGS). Moreover, the rise in clinical applications of next-generation sequencing in precision oncology has

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fueled key companies' efforts to develop novel platforms for genomic assays. For instance, in February 2021, Gabriel Precision Oncology Ltd. and Congenica collaborated to develop an automatic clinical oncology interpretation software platform. Such developments are expected to boost the growth of the market.

Increasing cancer prevalence is driving the global clinical oncology next generation sequencing market. For Instance, According to Global Cancer Observatory (GLOBOCAN 2020) report, there were an estimated 19,292,789 new cancer cases and 9,958,133 deaths globally due to cancers. The breast cancer accounting for 2,261,419 new cancer cases in 2020, followed by lung (2,206,771), colorectum (1,931,590), prostate (1,414,259) and stomach (1,089,103) new cancer cases in 2020 worldwide.

Another factor boosting the market's growth is the reduction in the cost of NGS platforms. Clinical oncology next-generation sequencing techniques provide a high percentage of reads and low cost per reading. Leading players are introducing low-cost sequencing techniques. According to the study titled "Innovation at Illumina: The road to the USD 600 human genome," published in the Nature Portfolio in February 2021, A human genome can now be sequenced for USD 600 (down from USD 10,000 previously), with some speculating that a USD 100 genome is not far behind. Human genome sequencing has become more affordable, allowing researchers and clinicians to apply their knowledge to studying diseases and phenotypes.

Thus, all the aforementioned factors are expected to boost the market over the forecast period. However, lack of computational efficiency for data management and inadequate reimbursement policy are the major restraining factors for the market studied.

Clinical Oncology NGS Market Trends

Whole Genome Sequencing is Expected to Projected Significant Growth Over the Forecast Period.

Whole-genome sequencing (WGS) is expected to be the fastest-growing technology segment due to its utility in distinguishing and comparing normal and tumor tissues. Furthermore, cancer patients' whole-genome sequencing aids in the discovery of current mutation treatments as well as the prediction of mutations. It also assists with cancer prognosis and treatment regimen development based on the genes involved.

Furthermore, according to the study titled "Whole-genome sequencing in oncology: using scenario drafting to explore future developments," published in the BMC Cancer in May 2021, WGS has huge potential in disease management and Cancer treatment, genetic counseling, and risk assessment. Thus the advantages of WGS in clinical oncology are anticipated to drive the segment growth.

However, various strategic activities by the key market players such as mergers and acquisitions, product launches, and collaboration are anticipated to drive the segment growth. For Instance, in February 2022, C2i Genomics, a cancer intelligence company, and Twist Bioscience Corporation formed a partnership to develop whole-genome cancer reference materials. This resource will provide diagnostic labs around the globe to better validate and monitor the quality of their whole-genome cancer screening and minimal residual disease (MRD) products. In addition, C2i will integrate Twist's library preparation into their MRD workflow. Similarly, In February 2021, Stanford Medicine launched an in-house whole genome sequencing service. Whole genome sequencing, a test that maps all of an individual's DNA in cardiovascular and cancer diseases, underpins the service.

Thus, all aforementioned factors are expected to boost the segment over the forecast period.

North America Holds a Significant Share in the Market and Expected to do Same Over the Forecast Period

North America dominated the clinical oncology NGS market. Factors such as regulatory efforts in the United States to increase cancer screening diagnoses contribute to the market's growth.

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The growing prevalence of chronic diseases is likely to boost the market in the country. For Instance, According to GLOBOCAN 2020 statistics, 2,281,658 new cancer cases were diagnosed in the United States in 2020, with 612,390 fatalities. It indicates that the incidence and mortality rate associated with cancer is significantly high, which increases the demand for clinical oncology NGS platforms, thereby boosting the market studied.

Additionally, the high concentration of key players in North America, increasing Food and Drug Administration approvals along with strategic alliances, and high investment in research and development activities are expected to boost the market in the region. In June 2021, Labcorp and OmniSeq, launched the OmniSeq INSIGHTsm, a comprehensive genomic and immune profiling, tissue-based test that integrates next-generation sequencing (NGS) technology. The test is designed to advance precision oncology and improve patient outcomes as part of Labcorp's commitment to empowering better health decisions for patients by adding cutting-edge diagnostic tools in precision medicine.

Personalized medicine has become a core area of research in the healthcare industry, entered mainstream clinical practice, and is changing how many diseases are identified and treated. Furthermore, increasing investments in the development of structure-based drug designs, rising demand for high-quality research tools for data reproducibility, and increasing focus on developing personalized therapeutics. Key players in this market have formed strategic alliances to strengthen the market position. For Instance, in March 2020, Thermo Fisher Scientific and Janssen Biotech, Inc. agreed to collaborate on the development of CDx for tumor management. Janssen Research & Development, LLC will validate multiple biomarkers for use with Thermo Fisher's Oncomine Dx target test to identify patients with NSCLC under the terms of the agreement.

Thus, all such factors are expected to boost the region's market over the forecast period.

Clinical Oncology NGS Market Competitor Analysis

The clinical oncology next-generation sequencing (NGS) market is highly competitive, with several global and international market players. The key players are adopting different growth strategies to enhance their market presence, such as partnerships, agreements, collaborations, new product launches, geographical expansions, mergers, and acquisitions. Some of the key players in the market are Illumina, Inc., Thermo Fisher Scientific, F. Hoffmann-La Roche Ltd., Agilent Technologies, Myriad Genetics, Beijing Genomics Institute (BGI), Perkin Elmer.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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